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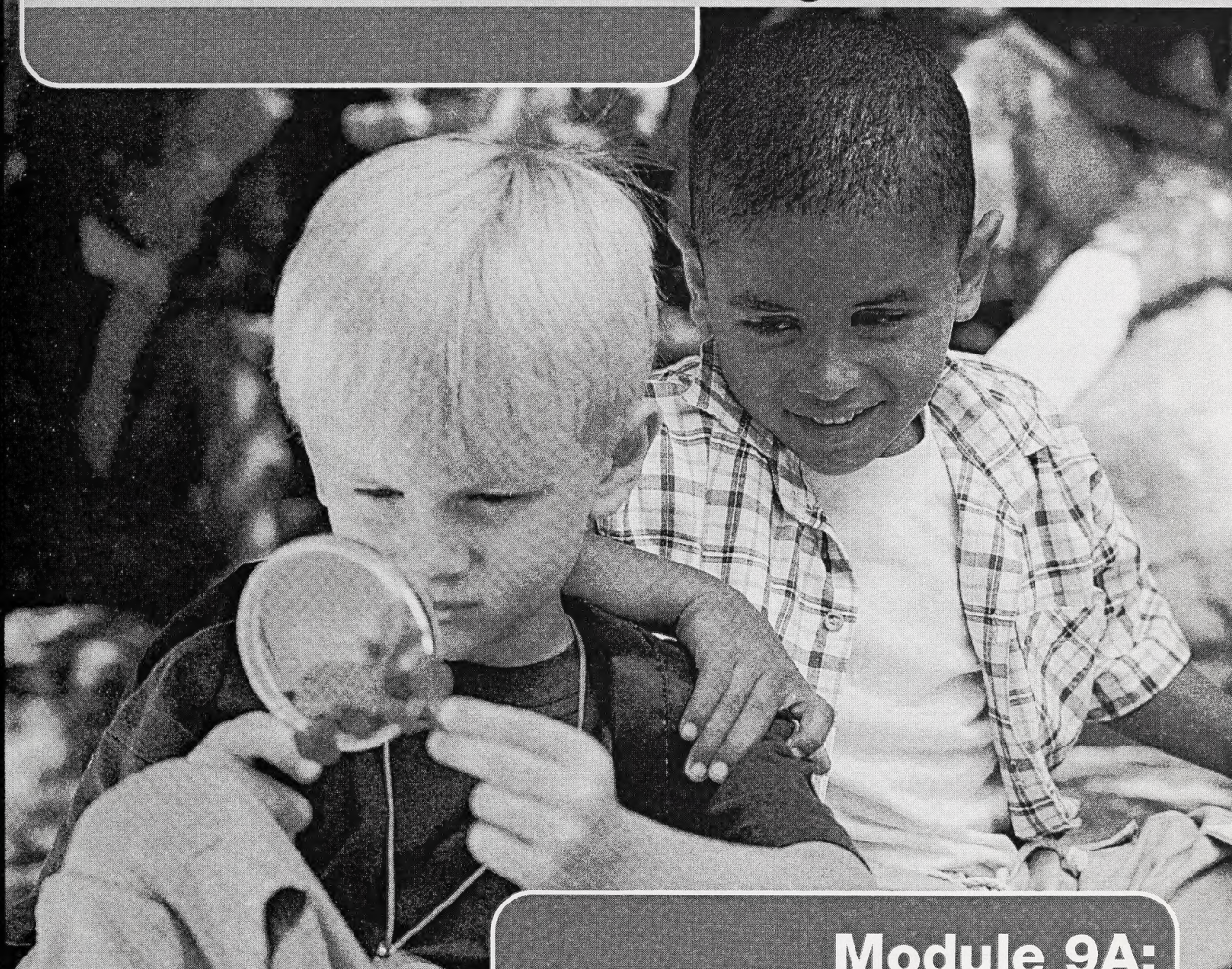
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Grade Three

Thematic

Home Instructor's Guide and Assignment Booklet



Module 9A:
Inventions and Explorations
Day 1 to Day 9

Grade Three Thematic
Module 9A: Inventions and Explorations
Home Instructor's Guide: Days 1–9 and Assignment Booklet 9A
Learning Technologies Branch
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This document is intended for	
Students	✓
Teachers	✓
Administrators	
Home Instructors	✓
General Public	
Other	



You may find the following Internet sites useful:

- Alberta Education, <http://www.education.gov.ab.ca>
- Learning Technologies Branch, <http://www.education.gov.ab.ca/lrb>
- Learning Resources Centre, <http://www.lrc.education.gov.ab.ca>

Exploring the electronic information superhighway can be educational and entertaining. However, be aware that these computer networks are not censored. Students may unintentionally or purposely find articles on the Internet that may be offensive or inappropriate. As well, the sources of information are not always cited and the content may not be accurate. Therefore, students may wish to confirm facts with a second source.

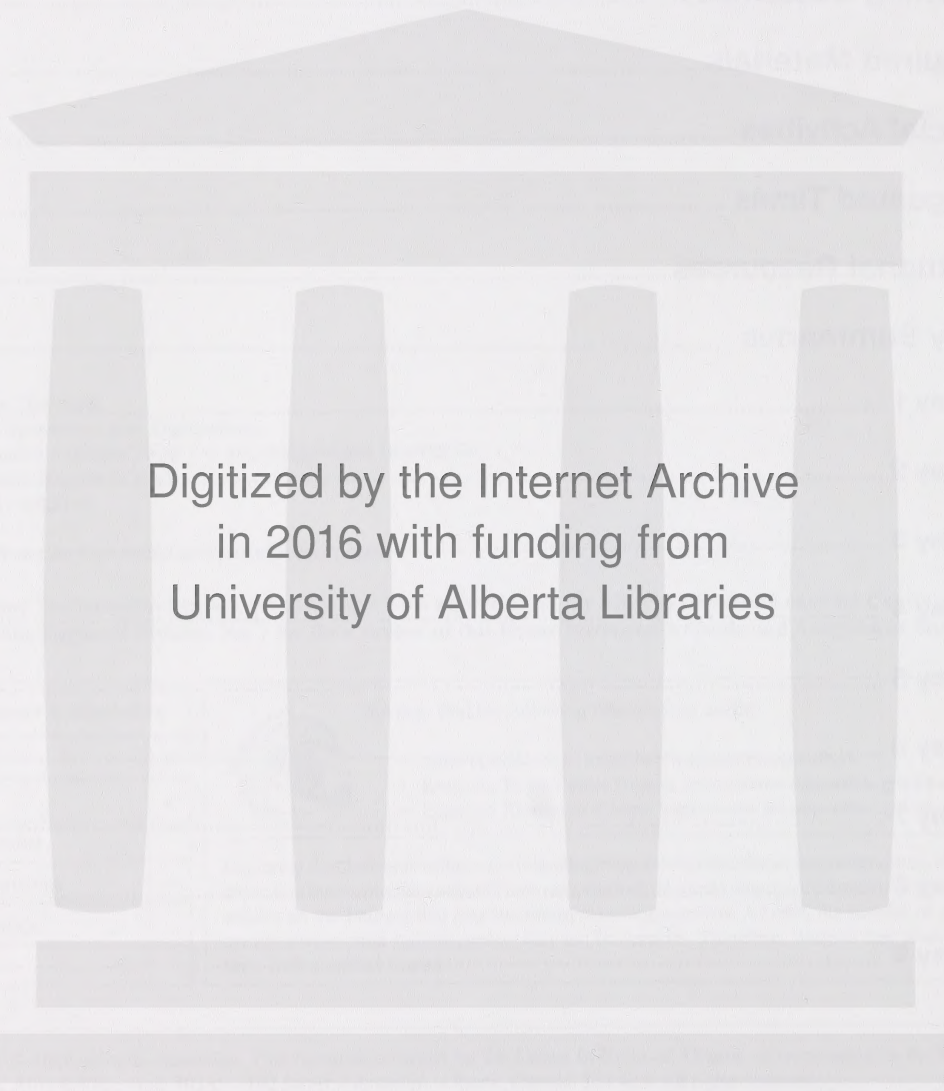
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Module 9A: Inventions and Explorations

In Module 9A the student explores how a variety of inventions have changed the world. The science topic Building with a Variety of Materials continues. The social studies focus is global citizenship. In English language arts the student reviews strategies to read for information, works on creative-writing skills, and develops vocabulary and spelling skills by studying homonyms.

The Home Instructor's Guide for Module 1A contains general information about the course components, additional resources, role of the home instructor, time commitment, and assessment. If you do not have access to the Home Instructor's Guide for Module 1A, contact your school or teacher to obtain this important information.

Learning Outcomes

Science, Social Studies, and English Language Arts

Science outcomes for this portion of the module include the following:

- using a variety of materials and techniques to design, construct, and test structures intended to support objects, span gaps, or provide models
- selecting simple tools and using them safely
- understanding and using a variety of methods to join or fasten materials
- identifying the intended use and purpose of an object and explaining how knowing the intended purpose helps guide decisions about materials
- identifying and accessing, with assistance, sources of information and ideas
- understanding that simple designs are often as effective as more complex ones, but may be less expensive and easier to build
- recognizing the importance of good workmanship and demonstrating growth toward it

Science problem-solving skills include the following:

- identifying the purpose of the object to be constructed
- attempting a variety of strategies to complete tasks
- identifying the steps followed in completing the task and explaining the purpose of each step
- identifying the materials and how they are used
- engaging in all parts of the task
- communicating the results of construction activities using written and oral language and pictures
- evaluating the product and identifying possible improvements

Social studies outcomes include the following:

- examining the geographic characteristics that shape communities in other parts of the world by exploring and reflecting upon a number of questions of inquiry
- examining economic factors that shape communities in other parts of the world by exploring and reflecting on a variety of questions of inquiry
- demonstrating an understanding and appreciation of Canada's roles and responsibilities in global citizenship in relation to communities in the world
- appreciating elements of global citizenship
- recognizing how their actions might affect people elsewhere in the world and how the actions of others might affect them
- respecting the equality of all human beings
- exploring the concept of global citizenship by reflecting upon a variety of questions of inquiry

English language arts outcomes include the following:

- identifying types of literature
- developing a variety of comprehension strategies, including setting a purpose for reading
- monitoring and confirming meaning by rereading
- discussing, representing, and writing about ideas in text
- sharing ideas that are related to new information
- telling and writing about favourite characters or parts of text
- using a dictionary to confirm meaning
- drafting ideas into a paragraph with a topic and supporting sentences
- organizing and sharing ideas and information on a topic to engage a familiar audience
- presenting oral readings with fluency, rhythm, and appropriate intonation
- using apostrophes to show contractions and possession
- writing legibly
- adding sufficient detail to sustain plot and tell about the setting and characters
- editing for complete and incomplete sentences, punctuation, and spelling
- finding information to answer a research question
- using captions, headings, pictures, and graphic organizers to access information
- summarizing data using point form
- experimenting with ways to generate and organize ideas and information
- recording sources of information using titles
- using print and non-print aids to illustrate ideas and information

Before beginning this module, borrow library books for shared reading and silent reading. Choose stories, novels, and magazine articles about inventions, technology, and world connections. To develop spelling and reading skills in Module 9A, phonics and spelling activities focus on homonyms and dictionary skills.

Music

Provide a variety of musical opportunities for the student.

Art

The student will design a newspaper bridge, a kite, scrapbook pages, and a paper airplane.

The student creates a story for a young child and illustrates it using pop-ups, flaps, or sliding pictures.

The following art concepts are integrated into Module 9A:

- Materials influence the form and function of an object.
- Details, accents, and outlines will enhance a composition.
- Knowledge gained from study can be recorded visually.
- An original story can be created visually.

Physical Education and Health and Life Skills

Daily fitness activities are strongly recommended. The student should continue to walk or jog in the community as part of the fitness routine. When no specific activity is scheduled, swimming or sports such as soccer or softball are good options.

Technology

The student should use the Internet to research information. Remember, the information on the Internet may not be at the student's reading level.

Help the student when he or she gathers information:

- **Read** the information with the student.
- **Print** any interesting information the student can use.
- **Gather** the information in the Writing Folder for writing and research assignments.

The student should use the computer to plan, compose, revise, and print the book for a younger child or for the research paragraph on inventions. The student will also integrate graphics with text.

Be sure that your student understands and can use common computer tools such as spell-check and font selection. Teach your student proper keyboarding techniques.

Required Materials

The student will need the following items for Module 9A:

- Module 9A Student Module Booklet
- Module 9A Assignment Booklet
- *Collections: Carving New Frontiers*
- junior dictionary
- *Modern Curriculum Press Phonics: Level C*
- atlas
- Writing Folder

- Art Folder
- materials for building projects: newspaper, cardboard, two unopened cans of soup, a wooden skewer, string, plastic ribbon, masking tape, metre-stick or measuring tape, brass paper fastener, two large rubber bands.
- magazines that can be cut; decorative materials such as stickers, coloured paper, and stencils
- eight pipe cleaners, modelling clay, small objects (such as pennies, paper clips, or blocks) to be used as mass
- interlined notebook or paper for handwriting

Special Activities

Research

Day 8: Research an invention, inventor, or discovery.

Field Trips

Day 8: Visit a museum to research an invention or discovery (optional).

Building Projects

Day 1: a newspaper bridge

Day 2: a simple kite

Day 3: paper airplanes

Day 4: an illustrated storybook for a younger child

Day 6: a vehicles scrapbook page

Day 8: a structures scrapbook page

Day 8: testing a dome shape

Day 9: a containers scrapbook page

Suggested Times

The general schedule for the day is as follows:

Activity	Time
Introduction and Getting Started	5–10 minutes
English Language Arts (includes reading, writing, spelling, and phonics)	60–90 minutes
Math	45 minutes
Physical Education and Health and Life Skills	15–30 minutes
Silent Reading	15 minutes
Thematic Activities	60–90 minutes
Story Time	15 minutes
Looking Back	15 minutes

Exceptions to this general time schedule will be noted in the Daily Summaries. Not all activities will appear each day.

Additional Resources

The following books may be available at your local library or bookstore. Your librarian may be able to suggest additional or alternative books.

Fiction: Short Stories and Picture Books

No Problem, Eileen Browne
Amelia's Fantastic Flight, Rose Bursik
Crosby, Dennis Haseley
Hamlet and the Enormous Chinese Dragon Kite, Brian Lies
Dragon Kite of the Autumn Moon, Valerie Reddix
Curious George Flies a Kite, Margret Rey
The Tiny Kite of Eddie Wing, Maxine Trottier

Fiction: Chapter Books

Muggie Maggie, Beverly Cleary
The Gadget War, Betsy Duffey
The King of Dragons, Carol Fenner
Almost Famous, David Getz
Sable, Karen Hesse
The Kite Fighters, Linda Sue Park

Non-Fiction

Great Discoveries and Inventions That Advanced Industry and Technology, Antonio Casanellas

For Every Child: The UN Convention on the Rights of the Child in Words and Pictures, Caroline Castle

Kites: Magic Wishes That Fly Up to the Sky, Hitz Demi

Girls and Young Women Inventing: Twenty True Stories About Inventors Plus How You Can Be One Yourself,

Frances A. Karnes

The Story of Things, Kate Morgan

The Real McCoy: The Life of an African-American Inventor, Wendy Towle

Internet

Search using the keywords *paper making*, *kites*, *paper airplanes*, *inventors*, *inventions*, or search under the names of specific inventors and scientists.

- *The Paper Project—Making Paper at Home or in the Classroom*
<http://lsvl.la.asu.edu/paperproject/pmathome/pmathome.html>
- *SciZone—Ontario Science Centre: All About Papermaking*
<http://www.ontariosciencecentre.ca/scizone/e3/paper/>
- *Newspaper Kite*
<http://www.clem.freemove.co.uk/page4.html>
- *Kansas City Kite Club—Kites for Kids Only*
<http://www.kckiteclub.org/DaveEllis/kidspage.htm>
- *Inventors*
<http://inventors.about.com>

Daily Summaries

Read each day's summary in this guide and familiarize yourself with the lesson before instructing the student. Materials that are used often are not listed under the daily materials list. They should be available in the student's Course Container, and the student should be responsible for gathering them. The daily materials list is meant only to help you prepare for unique activities.

You will have to decide how much practice the student needs when introducing new concepts. If you feel further practice is needed, you can extend the activities or create new tasks for the student.

Day 1

Learning Outcomes

The student brainstorms a list of inventions and chooses three that, in his or her opinion, have changed the world the most. The student reads a non-fiction selection about inventions that originated in China. Scanning skills are practised to locate information. The spelling words are introduced. Homonyms are a focus. The student constructs a bridge using only newspaper.

Materials You Need Today

- newspapers
- two full soup cans or other small cans

Getting Started

To begin the day, the student brainstorms a list of things that have been invented since the settlement of Canada. As the student names inventions, list them on the chalkboard or whiteboard. The student will choose three inventions that he or she thinks changed the world the most.

“Fire Dragons and Flying Money”

The student is introduced to a non-fiction article about Chinese inventions. After reading each page, the student answers factual questions. If necessary, encourage the student to reread and scan for keywords to locate information.

Your student has been checking his or her work in the Student Module Booklet with your assistance. Allow the student to do this independently. If the student has a problem and asks for assistance, guide the student through locating and correcting the completed work.

Be sure the student completes the activities in the Student Module Booklet before turning to the Suggested Responses. The student may need to be reminded that his or her own wording of an answer may not be exactly the same as the given answer, but the meaning should be the same. Unless otherwise specified, the student’s answers need not be in complete sentences.

Make sure the student is correcting any errors that were made.

Spelling

The spelling words for Days 1 to 9 include eight high-frequency homonyms that are frequently misspelled. Dictate the words when the student is ready to write the pre-test.

Say each word in the order listed. Say the word in a simple sentence and then repeat the word. Be sure the sentence makes the meaning of the homonym clear.

These are the spelling words:

- | | | | |
|---------|--------|---------|--------|
| • there | • our | • their | • hour |
| • would | • knew | • wood | • new |

Phonics

Homonyms are introduced in this lesson. Be sure the student understands that homonyms are words that sound alike but have different spellings and meanings.

Make It Stronger

Observe your student as he or she attempts to create a one-metre bridge using only newspaper and tape. Does the student become frustrated quickly or does he or she persevere? Does the student think things through, use trial and error, or ask for help immediately?

If the student becomes frustrated and thinks the task is impossible, suggest that he or she try rolling newspaper sheets into long tubes. Some experimentation will be required to create tubes strong enough to support the cans.

Enrichment

If the student is interested in making paper, check the following websites for information, borrow a craft book that explains the process, or search the Internet using the words *papermaking at home*.

- *The Paper Project—Making Paper at Home or in the Classroom*
<http://lsvl.la.asu.edu/paperproject/pmathome/pmathome.html>
- *SciZone—Ontario Science Centre: All About Papermaking*
<http://www.ontariosciencecentre.ca/scizone/e3/paper/>

You may further extend the student's learning by researching how commercial paper is made today. Some websites may have video clips outlining the process.

Day 2

Learning Outcomes

A non-fiction selection about kites is read. Multiple-choice questions are answered and map skills are practised. The student identifies spelling words for study and selects four challenge words. Problem-solving skills are applied in the construction of a kite. The student examines how geographic characteristics shape communities.

Materials You Need Today

- a wooden skewer
- string
- masking tape
- paper (38 cm x 31.5 cm)
- plastic ribbon

Getting Started

Discuss the student's experiences with kites.

Kite Fun

The student reads a factual article about kites. This article contains words that may be unfamiliar to the student. Encourage him or her to use reading strategies to figure out unfamiliar words. If your student still has difficulty reading silently for information, you may want to ask him or her to read the article one paragraph at a time and then question him or her about the main idea and supporting ideas included in each paragraph.

The student may need to reread the article in order to answer the multiple-choice questions in the Student Module Booklet.

Spelling

Help the student choose four challenge words. If you have noticed any high-frequency words spelled incorrectly in his or her written work, assign them as challenge words. Some other words you may want to consider are the following:

- invention
- climate
- inventor
- concern
- building
- transportation
- Chinese
- communication
- message
- vehicle
- structure
- automobile

Make a Kite

In this activity the student explores materials that would be suitable to make kites and then follows instructions to create a simple kite.

If the student wishes to further explore kite making, use the keywords *kites* or *kite making* to do an Internet search. The following websites may be helpful:

- *Newspaper Kite*
<http://www.clem.freemove.co.uk/page4.html>
- *Kansas City Kite Club—Kites for Kids Only*
<http://www.kckiteclub.org/DaveEllis/kidspage.htm>

Land and Climate Affect Choices

The student reviews how land and climate affect job choices and local industries. Help your student understand how job choices are related to climate, natural resources, and geography.

The student infers what job choices may be available in Victoria after discussing the climate and geography of Vancouver Island. You may need to review the types of jobs that are commonly found near ocean communities. Jobs in fishing, shipping, ferry or tugboat services, air services, or tourism are often available in these areas.

Day 3

Learning Outcomes

The day begins with an exploration of how inventors might come up with the idea for an invention. A poem is read. The student practises oral-reading skills and creative-thinking skills to create an imaginary invention. The spelling words are practised in context, and the study of homonyms is extended. The quality of life in communities in Canada is compared to that of communities in India. Flying machines are reviewed, and directions are followed to construct a paper airplane.

Materials You Need Today

- a sheet of 35.5 cm by 21.5 cm paper (legal-sized paper)
- paper clips

Getting Started

In today's introductory activity, the student thinks about jobs, dreams, or activities that he or she would like to do but can't. The student makes up two sentences that begin with "If only I could . . ."

Thinking Up Ideas

Today's reading selection is a poem in which the narrator "thinks up" helicopters. After you read the poem aloud to the student, several questions are to be completed in the Student Module Booklet. After answering the questions, the student reads the poem aloud to you. Observe the student's fluency as this poem is read. Does the student use the punctuation marks to guide expression? Does the student read smoothly and at an appropriate volume?

The student completes an assignment in the Assignment Booklet in which he or she "thinks up" a new invention. Encourage creative thinking. The machine does not have to be realistic, but the student should have thought about the purpose of the machine and what it would look like.

Spelling

Spelling Dictation Steps

- Prepare a space on the chalkboard or on chart paper for the spelling sentences.
- Say the spelling word.
- Dictate (say) the complete sentence. Repeat the spelling word.
- Pause for a moment; then repeat the entire sentence.
- Give the student enough time to write the sentence.
- Print the sentence correctly on the board or on chart paper.
- Give the student time to make self-corrections. Discuss why any errors occurred.
- Check the student's work to make sure each self-correction is accurate.
- Continue to dictate the sentences, one at a time, until they all have been written.

Tell your student to think carefully about the sentence before adding the punctuation. Some of the sentences are statements, some are questions, some are commands, and some are exclamations. The student should also think carefully about the meaning of the homonym in the sentence. Many students confuse homonyms when writing sentences.

Dictation Sentences

new: Is that a new shirt?

our: Our bus was late today.

wood: Bring in some wood for the fire.

their: Have you been to their house?

knew: I knew he was unhappy.

hour: The show begins in one hour.

would: Would you like to go with me?

there: Quick, look over there!

Physical Education and Health and Life Skills

Read the poem aloud and ask the student to act out each of the movements described in the poem. For example, read "a vertical/whirling/winding/bug" and then give the student a minute or so to do that movement. Then proceed to the next lines that describe an action. Continue in this way through the poem.

After the student moves to the words from the poem, ask for suggestions of other flying machines and have the student dramatize the movements of each machine.

Trading Goods and Services

Several new ideas are introduced in the Student Module Booklet. You may need to explain the terms *standard of living*, *natural resources*, *quality of life*, and *population* in greater detail. If necessary, read the information aloud to the student and then discuss the main idea of each paragraph.

After reading the information in the Student Module Booklet, the student is asked to compare the two countries by adding information to a table and then to use the table to make comparisons. In order to do this, the student may need to reread the information. Encourage the student to skim the passage to look for keywords and then reread the paragraph. For example, if the student is trying to find information about Canada's natural resources, he or she would look for the words *Canada* and *natural resources*. When these words are found, the student can then reread the paragraph to find the necessary information.

Flying Machines

The student lists machines that fly and thinks about the impact of these inventions on global trade.

Two paper airplanes are constructed by folding paper. The first airplane is made by the student using his or her own ideas. Most students are familiar with at least one way to fold paper to make a paper glider. If your student is not familiar with this activity, show him or her one type of airplane you know how to make.

The student is then asked to follow instructions to make a complex folded airplane. If necessary, assist the student in completing the steps.

The student tests the two airplanes in a series of activities. Prepare a table such as the following one on the chalkboard or on chart paper to help the student compare the two planes. You may wish to ask the student to number the planes 1 and 2 to help complete the table. As the student makes observations about the planes, add the information to the table.

Test	Plane 1	Plane 2
paper clip on the nose		
paper clip on the tail		
paper clip on the wings		
paper clip on the bottom		
throwing upward		
throwing downward		
throwing gently		
throwing very hard		
adding flaps to the wings		
adding a rudder to the tail		

The student may wish to suggest other tests.

Day 4

Learning Outcomes

The student investigates stories for young children in preparation for writing a story for a young child. Ideas are brainstormed, and a plan for a story is constructed. The student independently writes the story using the plan and then revises and edits the story. Illustrations are created for the story using some 3-D techniques, and a cover is designed to present the story as a book. Lastly, the student begins to investigate how technology influences day-to-day life in communities.

Materials You Need Today

- cardboard, poster board, or other heavy material suitable for a book cover

Getting Started

Begin the day by discussing the questions in the Student Module Booklet. The student will create an original story book for a younger child today. If your student is unfamiliar with the likes and dislikes of younger children, share your ideas. Remind the student of the kind of stories she or he enjoyed. Help the student understand that small children enjoy simple text that tells about the picture. They like stories about familiar people, animals, and make-believe characters. Stories that involve action, suspense, or surprises are also fun for small children.

Invent a Story

As the student brainstorms ideas for the story, list the ideas on a chalkboard or whiteboard. Help the student choose a suitable topic.

Discuss the different methods of planning stories, but allow the student to choose which method to use. Encourage the student to plan and write the story independently.

After writing the story, the student is asked to list points that should be considered when editing a story. If necessary, the student may look back in the previous Student Module Booklets for a list of editing ideas.

Invent the Illustrations

The student is asked to create movable illustrations for the story book. A variety of pop-up, sliding, and flap pictures are illustrated in the Student Module Booklet. The student has probably used these techniques in earlier grades. If not, you may have to discuss how each type of picture could be created.

Encourage the student to plan the illustrations before beginning.

Invent a Cover

The student examines a book cover and notices what information is displayed on the cover. The student also looks at how the book is bound. Good workmanship is discussed.

The student then plans the cover for his or her book. The student is asked to select a material to use for the cover, to plan a way to bind the pages, and to list the tools that will be needed. If your student is unfamiliar with ways that simple books can be bound, suggest stapling, using a hole punch and string, or sewing the pages together, depending upon the tools that you have available.

When the cover is completed, the student practises reading the story aloud and then reads it to a younger child. If no younger children are available in your home, make arrangements for the student to read the story to a child that lives nearby. If it is not possible to do this today, arrange for a convenient time. The student will need to complete Assignment 5 after this has been done.

Day 5

Learning Outcomes

The student explores how inventions in transportation and communication have changed communities. A story about the invention of the automobile is read, and comprehension questions are completed. The student practises retelling a story using a summary web. The study of homonyms continues. The student begins to explore the concept of global citizenship by discussing how sharing ideas can contribute to positive change. The student creates a moveable arm to simulate the Canadarm.

Materials You Need Today

- cardboard
- a brass paper fastener
- two large rubber bands

Getting Started

The day's activities begin with the student thinking about how inventions in transportation and communication have changed communities.

“The Very Clever Device”

This story tells about a girl's experience with the first automobiles in the area. The student reads each page in the story and answers comprehension questions.

Retelling a Story

Tell the student a story about an experience that you had when you were a child or young adult. The student will make up a title for your story and note the main events on a web. Ask the student to use the web to retell the story to another family member.

Communication and Transportation Technology

The student learns that modern transportation and communication technologies are not equally available to everyone in the world.

Help the student understand that many people, even in developed countries, do not have access to modern transportation and communication technologies. You may wish to ask the student to research one or more remote communities (for example, in the Arctic) to find out exactly which communication devices or transportation devices are available in that community.

Create a T-chart to help your student discuss the pros and cons of sharing ideas, resources, and skills.

Should Canadians Share?	
Why Canadians Should Share	Why Canadians Shouldn't Share

Ask the student to give at least one reason why he or she thinks Canada should share ideas, inventions, or developments in technology. The student should think of one reason why Canada shouldn't share as well. You may need to guide the student in this discussion, but allow the student to suggest the reasons. Reasons Canada should share may include humanitarian reasons or to improve the world environment. Sharing new developments may help other countries add to or further improve the technology to the benefit of everyone, or it may develop a market for trade between the countries.

Reasons Canada may not want to share include financial reasons, security reasons, and environmental reasons.

An Arm Model

The student creates a movable model of an arm by joining cardboard with a paper fastener and rubber bands.

Day 6

Learning Outcomes

The student prepares a plan for and retells the story read last day. The use of the apostrophe to show possession is introduced. Dictionary skills and alphabetical order are reviewed. The student begins creating a scrapbook to meet Information and Communication Technology outcomes for placing an image with text. Global connections are further explored.

Materials You Need Today

- *Grade Three Thematic Multimedia CD*
- a computer with a word-processing program
- a variety of materials (such as stickers, coloured paper, and borders) for decorating a scrapbook page

Getting Started

The student thinks about the conclusion of the story from Day 5 and discusses why the characters were wrong about the usefulness of the automobile.

“The Very Clever Device”

The story “The Very Clever Device” is retold from memory on a web in the Student Module Booklet. The story is then reread, and the student draws a picture and writes a sentence to tell about a favourite part.

The student learns how apostrophes are used to show possession. After completing some practice activities in the Student Module Booklet, the student hunts for words with apostrophes in today’s story. These words are classified as contractions or possessives.

Phonics

Dictionary skills are reviewed. The student practises alphabetizing words that begin with the same letter.

Motorized Vehicles

Over the next few days the student will create three scrapbook pages to illustrate examples of vehicles, structures, and containers.

For this project, the student will need access to a computer word-processing program to meet the outcomes for the Information and Communication Technology curriculum. If you do not have access to a computer at home, arrange for the student to use a computer at a community library or local school for this project.

More Global Connections

The information in this activity is quite abstract. You may wish to read the information aloud and discuss it with the student. If you know about examples of global connections that are applicable to your community, discuss them with your student. For example, many Alberta communities are “twinning” with communities in other countries. The communities send visitors back and forth and exchange information on topics such as civic government, agriculture, recreation, and tourism. Help the student understand that the actions of Canada impact other countries and vice versa.

Give the student a chance to add to the “Should Canadians Share?” chart that was begun on Day 5.

Day 7

Learning Outcomes

The student ranks inventions according to which is most important. The student goes on to read two student accounts of inventions and uses a note-taking strategy to make notes. More Canadian inventions are investigated. Spelling words are reviewed and using guide words in a dictionary is practised. World environmental concerns are considered.

Materials You Need Today

- newspapers or news programs on television or radio

Getting Started

To begin the day, the student thinks about inventions that he or she uses nearly every day. The inventions are then listed in order of importance to the student.

Student Reports

Two student reports about inventions are read. After reading the reports, the student completes notes about the information. The student will use this note-taking strategy to research an inventor or invention of his or her choice on Day 8.

More Canadian Inventions

The student learns about more Canadian inventions.

World Environmental Concerns

The student is introduced to the concept that world communities are connected in their concern for the environment. The student learns how pollution can affect more than one country.

Over the next few days, search for and draw your student's attention to current world environmental concerns. You may wish to ask your student to make a bulletin-board display of newspaper clippings or television news items that deal with global environmental concerns. Discuss the environmental problem in each case and how countries are proposing to solve the problem. Help the student understand that countries may work together to make laws to preserve the environment.

Day 8

Learning Outcomes

The student chooses an invention, discovery, or inventor to research. The student plans and carries out research to write a paragraph about the invention selected. Using guide words in dictionaries continues to be practised. After reviewing some famous structures, the student develops a scrapbook page about structures to meet Information and Communication Technology outcomes. Domes are discussed, and the student builds and tests the strength of a dome structure.

Materials You Need Today

- eight pipe cleaners
- modelling clay
- small objects (such as pennies, paper clips, or blocks) to be used as mass
- a small plastic container or lid
- *Grade Three Thematic Multimedia CD*
- a variety of materials (such as stickers, coloured paper, and borders) for decorating a scrapbook page

Getting Started

To prepare for today's research project, the student discusses inventions, discoveries, or inventors that he or she is interested in. Help the student choose an appropriate invention, discovery, or inventor to research.

Research an Invention or Inventor

The student plans and carries out a research project. Help the student choose and locate suitable resources. If it is appropriate, take the student on a field trip to a museum that features an invention or an inventor. If necessary, assist by reading information aloud to the student. After taking notes, the student writes a report about the information, edits it, and rewrites it in the Assignment Booklet.

The student may choose to use a computer and a word-processing program to write the report. The report can be printed and sent to the teacher with the Assignment Booklet or it can be sent electronically. Be sure to arrange with the teacher how it will be sent.

Phonics

Write the following guide words on the blackboard or whiteboard:

lend • line

long • lynx

reward • riding

Write the following words on slips of paper. Ask the student to tape these words under the guide words where they would be found. Tell the student that some of the words will not be used because they do not fit under any of the guide words.

look

lock

loud

rewrite

like

rhyme

loss

listen

light

lamb

red

lick

less

leopard

rib

let

letter

rice

If necessary, display the alphabet and help the student do a few examples. Discuss why the word would or would not fit under a particular set of guide words.

The words *like*, *light*, *lick*, *less*, *leopard*, *let*, and *letter* should be placed under the guide words *lend • line*.

The words *look*, *loud*, and *loss* should be placed under the guide words *long • lynx*.

The words *rewrite*, *rhyme*, *rib*, and *rice* should be placed under the guide words *reward • riding*.

The words *lock*, *listen*, *lamb*, and *red* do not fit under any of the guide words.

If you feel your student needs additional practice, repeat the activity with new sample words and/or guide words.

Learn About Some Famous Structures

The student views some famous structures and learns about their purposes, the materials they were built with, and their design features.

After discussing the structures in the Student Module Booklet, the student is asked to construct another scrapbook page. The student will need access to a computer word-processing program. If you do not have access to a computer, arrange for the student to use a computer at a community library or a local school for this project.

Build a Dome

The student uses pipe cleaners to create a dome structure and a cube structure. The structures are compared by testing their ability to support mass.

After completing the test, the student discusses the results in Assignment 8: Domes and Cube Structures.

Day 9

Learning Outcomes

The student reviews the global connections discussed thus far and goes on to read and learn about other concepts of global citizenship. The spelling test for the module is written. A scrapbook page about containers is constructed to meet Information and Communication Technology outcomes. The student reflects on the learning in this module by completing the Student Learning Log.

Materials You Need Today

- *Grade Three Thematic Multimedia CD*
- a variety of materials (such as stickers, coloured paper, and borders) for decorating a scrapbook page

Getting Started

The student discusses and reviews the global connections that have been introduced in this module.

Sharing Skills

After reading about the skills that Canadians share with people around the world, the student imagines himself or herself as an adult sharing skills in a different country.

Spelling

Say each word in the order listed. Say the word in a sentence and repeat the word. Also test the student on the challenge words that were decided upon.

These are the spelling words:

- | | | | |
|---------|--------|---------|--------|
| • wood | • new | • there | • hour |
| • would | • knew | • their | • our |

More Connections

The student learns how Canadians help those facing challenges such as disasters, poverty, and human-rights issues. Help the student with the reading in this section and discuss the questions and concepts with the student. After discussing this information, the student completes an assignment in the Assignment Booklet.

One More Scrapbook Page

The student constructs a scrapbook page about containers. The student will need a computer word-processing program. If you do not have access to a computer, arrange for the student to use a computer at a community library or a local school for this project.

ASSIGNMENT BOOKLET 9A

Grade Three Thematic
Module 9A: Days 1–9

Home Instructor's Comments and Questions

Home Instructor's Signature

FOR HOME INSTRUCTOR USE (if label is missing or incorrect)

Student File Number:

Date Submitted:

Apply Module Label Here

Name

Address

Postal Code

*Please verify that preprinted label is for
correct course and module.*

FOR SCHOOL USE ONLY

Assigned Teacher:

Date Assignment Received:

Grading:

Additional Information:

Teacher's Comments

Teacher's Signature

Home Instructor: Keep this sheet when it is returned to you as a record of the student's progress.

INSTRUCTIONS FOR SUBMITTING THIS DISTANCE LEARNING ASSIGNMENT BOOKLET

When you are registered for distance learning courses, you are expected to regularly submit completed assignments for correction. Try to submit each Assignment Booklet as soon as you complete it. Do not submit more than one Assignment Booklet in one subject at the same time. Before submitting your Assignment Booklet, please check the following:

- Are all the assignments completed? If not, explain why.
- Has your work been reread to ensure accuracy in spelling and details?
- Is the booklet cover filled out and the correct module label attached?

MAILING

1. Do **not** enclose letters with your Assignment Booklets. **Send all letters in a separate envelope.**
2. Put your Assignment Booklet in an envelope and take it to the post office and have it weighed. Attach **sufficient postage** and seal the envelope.

FAXING

1. Assignment Booklets may be faxed to the school with which you are registered. Contact your teacher for the appropriate fax number.
2. All faxing costs are the responsibility of the sender.

E-MAILING

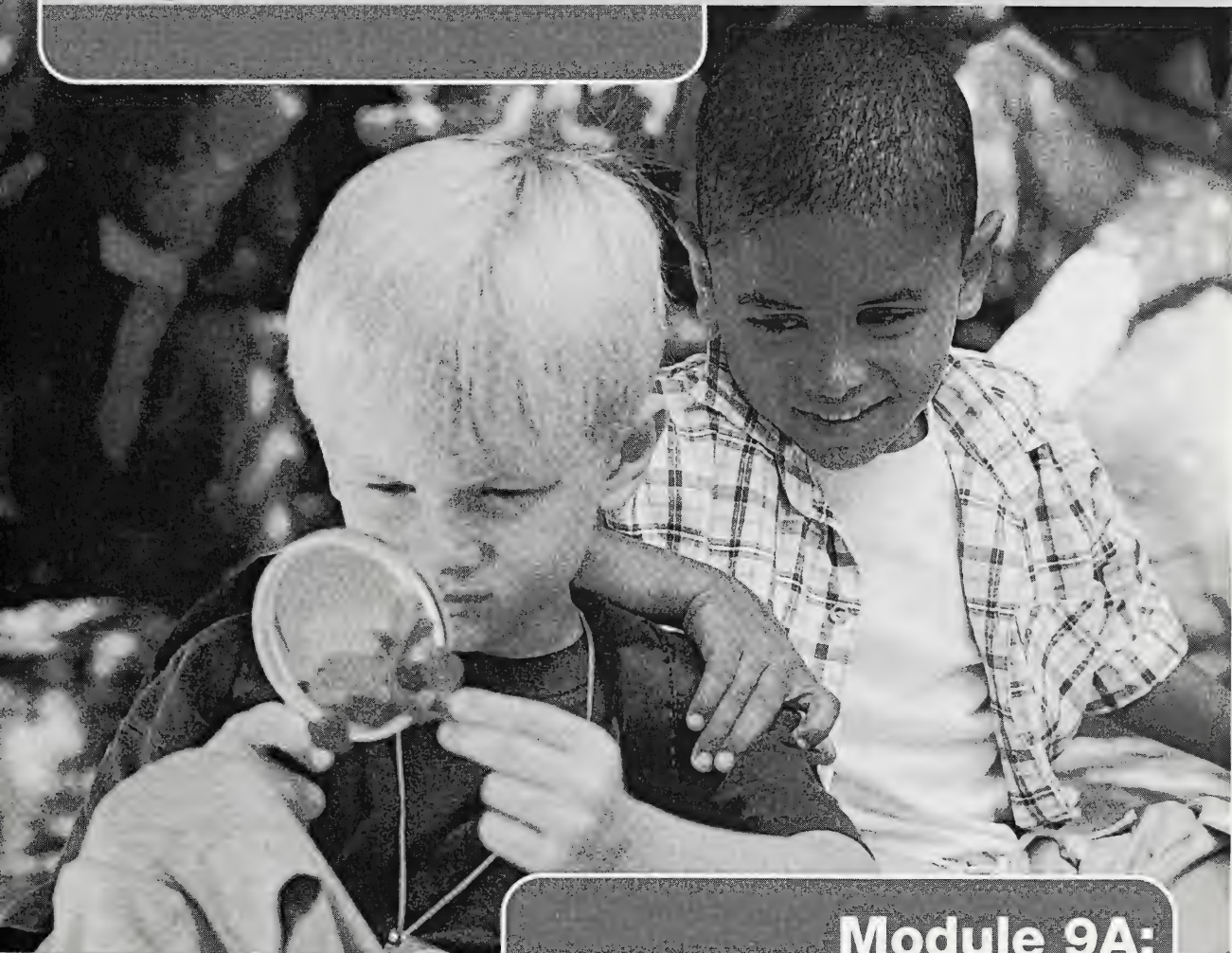
It may be possible to e-mail your completed Assignment Booklet to the school with which you are registered. You also may be **required** to e-mail some of your assignments. Contact your teacher for the appropriate e-mail address.

3

Grade Three

Thematic

Assignment Booklet



Module 9A: Inventions and Explorations Day 1 to Day 9



Learning
Technologies
Branch

Alberta
EDUCATION

FOR TEACHER'S USE ONLY

Summary

	Your Grade
Assignment 1	
Assignment 2	
Assignment 3	
Assignment 4	
Assignment 5	
Assignment 6	
Assignment 7	
Assignment 8	
Assignment 9	
Assignment 10	

Teacher's Comments

Grade Three Thematic
Module 9A: Inventions and Explorations
Assignment Booklet 9A
Learning Technologies Branch

Cover Art: Brendan Byrne/Digital Vision/Getty Images

The Learning Technologies Branch acknowledges with appreciation the Alberta Distance Learning Centre and Pembina Hills Regional Division No. 7 for their review of this Assignment Booklet.

This document is intended for	
Students	✓
Teachers	✓
Administrators	
Home Instructors	✓
General Public	
Other	



You may find the following Internet sites useful:

- Alberta Education, <http://www.education.gov.ab.ca>
- Learning Technologies Branch, <http://www.education.gov.ab.ca/lrb>
- Learning Resources Centre, <http://www.lrc.education.gov.ab.ca>

Exploring the electronic information superhighway can be educational and entertaining. However, be aware that these computer networks are not censored. Students may unintentionally or purposely find articles on the Internet that may be offensive or inappropriate. As well, the sources of information are not always cited and the content may not be accurate. Therefore, students may wish to confirm facts with a second source.

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Assignment 1

Spelling Pre-test

Write each word as your home instructor says it.

Assignment 2

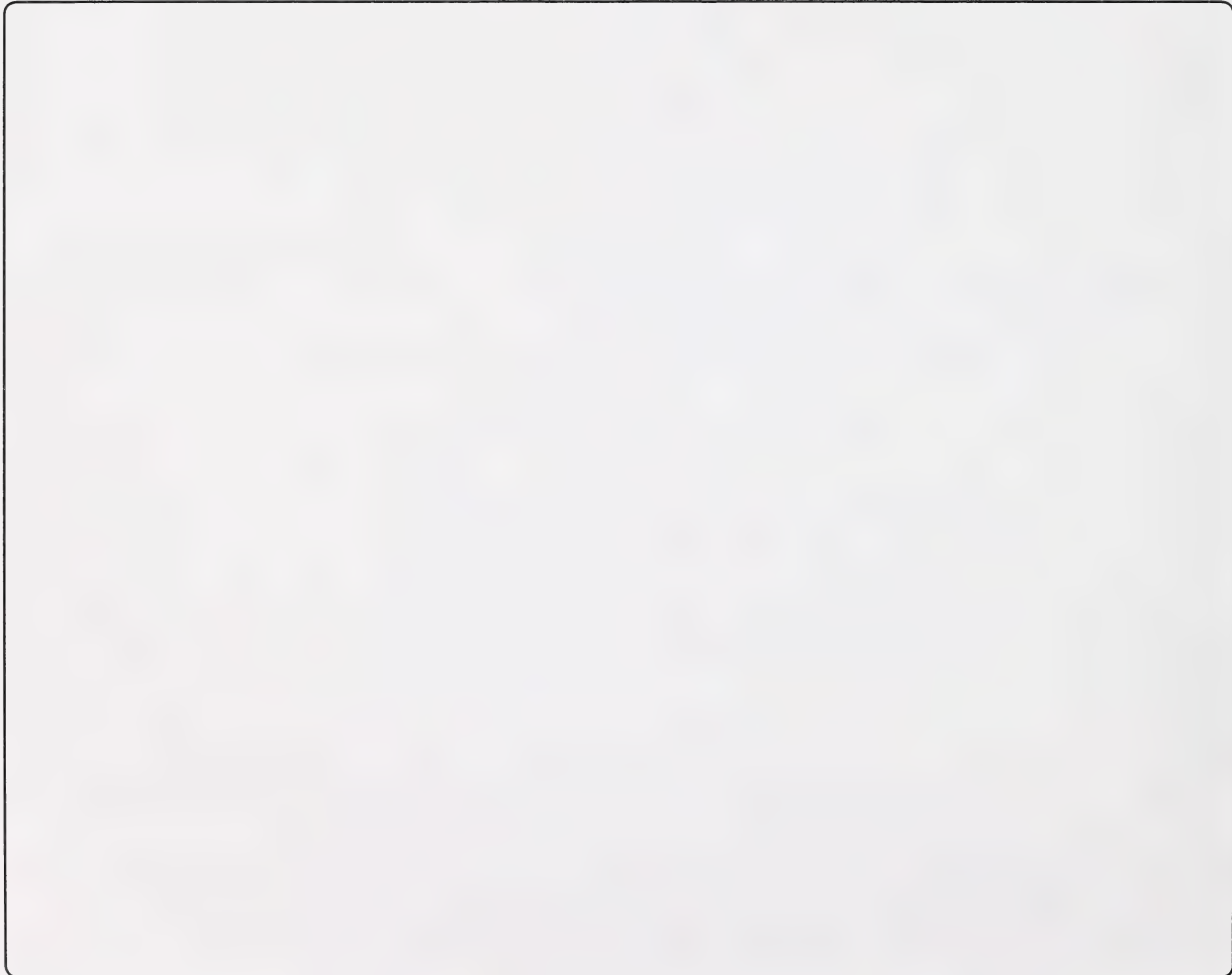
A Newspaper Bridge

Complete the following outline.

Task: to build a bridge that will span a one-metre gap and support two full soup cans

Materials: _____

Diagram: Draw a diagram and label it to show your design.



Assignment 2 continued

Procedure: Explain how you will build the bridge.

Evaluation: Tell what happened when you built the bridge.

What worked well?

What didn't work well?

To make it even stronger, I could _____

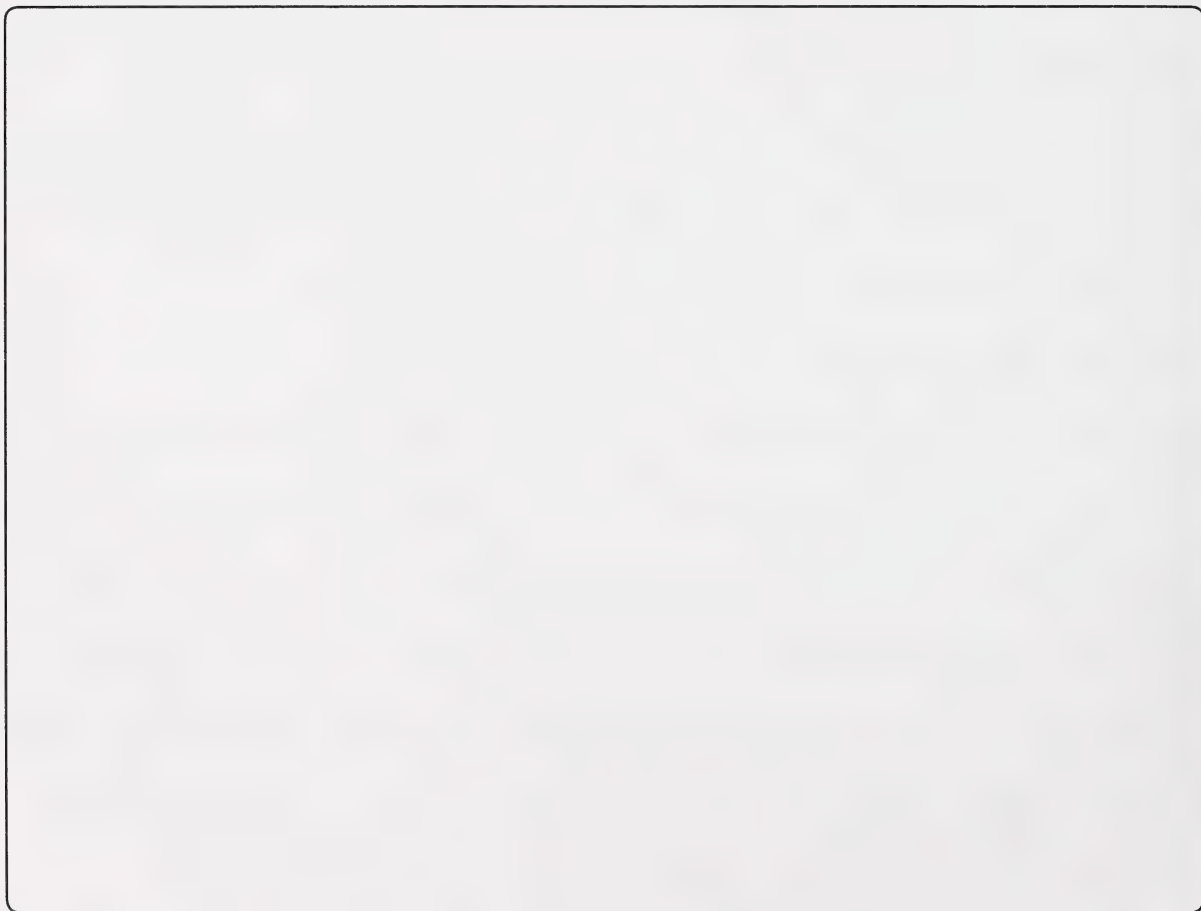
Assignment 3

My Invention

1. My "If only" sentence: _____

2. The purpose of my invention is to _____

3. Draw a diagram of your invention. Label it to show the parts.



Assignment 3 continued

4. Write some verbs to describe how your invention moves or works.

5. Compare your invention to something else.

My invention looks like a _____.

My invention moves like a _____.

My invention sounds like a _____.

Assignment 4

Canada and India

1. Use the information from the Student Module Booklet to help you complete the table.

	Canada	India
Does the country have lots of natural resources?		
Does the country export lots of manufactured goods?		
Does the country produce lots of food?		
Do the people use all of the food?		
Is the population large or small?		
In general, does the country have a high standard of living or a low standard of living?		

Assignment 4 continued

Compare Canada and India.

2. How are Canada and India the same?

3. How are Canada and India different?

4. What is the main reason that India has a lower standard of living than Canada?

Assignment 5

What I Learned

Answer the following questions to tell what you learned about making a book.

1. Did your planning list contain all the tools and materials you needed? _____
2. Did your materials work well for the purpose of making a book?
 - ☐ Yes, everything worked the way I planned.
 - ☐ No, I had problems with the materials.

If you answered no, tell what problems you had with the materials.

3. If you had problems with the materials, what materials would have worked better?

For the cover, _____ would have worked better.

For joining the pages and the cover, _____ would have worked better.

4. Were you happy with your story?
 - ☐ Yes, the child I read to enjoyed the pictures and the story.
 - ☐ No, some things did not turn out as well as I had hoped.

Assignment 5 continued

5. Tell what happened when you read your story to the child.

6. Were you happy with your workmanship?

- ☐ Yes, the cover and the pages looked neat and were strong and sturdy.
- ☐ No, some things did not turn out as well as I had hoped.

7. How would you change the book to make it better?

Write a Sentence

Write a Sentence

1. Use each of the following words in a sentence. The sentence should clearly show the meaning of the word. Use what you know about spelling, punctuation, and capitalization to create complete sentences. You may use more than one word in a sentence.

Father's won't their Mita's

they're sister's didn't would

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There is no text or other markings on the paper.

Assignment 6

continued

2. Choose two of the sentences you wrote on the previous page. Write the sentences in your best handwriting.

[illegible]

Assignment 7

My Invention Report

Write your report about an invention or a discovery.

[illegible]

Assignment 8

Domes and Cube Structures

Tell about the results of your test.

1. Which structure supported the most mass? Why do you think this happened?

2. Why are domes sometimes used in large buildings?

Spelling Test

Write each word as your home instructor says it.

[illegible]

Connections

You learned how Canada is connected with other communities in the world. On a separate piece of paper, write a paragraph to show what you have learned. Write a topic sentence. Then write about three or four connections between Canada and other countries. After you have written your sentences, edit and proofread your work. Copy your paragraph on the following lines or use a computer and a word-processing program to write your paragraph.

[illegible]

[The page contains faint horizontal ruling lines.]

Put a check mark beside the things you can do.

- ☐ I can tell about some connections between Canada and other countries in the world.
- ☐ I can use good workmanship to build models and complete projects.
- ☐ I can use guide words to help locate words in a dictionary.
- ☐ I can write using a topic sentence and supporting sentences.
- ☐ I can plan and write a fiction story by myself.

Student's Comments

Can you use resources to find information on a research topic? Can you make notes on that information? What difficulties do you have?

Module 9A

Home Instructor's Comments

Check **yes** or **not yet** for each question.

The student is able to

- use dictionary guide words and alphabetize words ☐ yes ☐ not yet
- use apostrophes correctly in writing activities ☐ yes ☐ not yet
- understand and respect the rights and cultures of diverse ethnic groups ☐ yes ☐ not yet
- use good workmanship when completing activities or projects ☐ yes ☐ not yet
- identify the purpose of vehicles, structures, and containers ☐ yes ☐ not yet
- appreciate how the actions of Canadians can affect people in other countries ☐ yes ☐ not yet

Additional Comments

Use this space to make comments about your student's ability to plan, write, and edit a story independently.

Do you have any questions or comments about this part of the module?

Module 9A

Items to Submit

Check each item as you include it for mailing to the teacher.

- ☐ **Day 4:** story plan and book for a younger child
- ☐ **Day 9:** one scrapbook page that shows integrated graphics and text and good workmanship
- ☐ **Day 9:** Assignment Booklet 9A